

Melvin Butte Forest Management Project
Silviculture Treatment Specifications and Implementation Guidelines
Stewardship Imp Units 31 and 42 (Lower 3 Creeks SnoPark)

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Management Allocations:

LRMP: Front Country Seen/Unseen MA 18

NWFP: Matrix

EA Unit: 23,109

EA Treatment Name: plantation, Dwarf mistletoe

Secondary treatments: hand-pile/ pile-burning, mastication, pruning, girdling, rx fire (Unit 31)

Structure:

Unit 42: Stand initiation phase- plantation/ Unit 31 Stem exclusion closed canopy (in eastern flank) and understory reinitiation in the western flank

Stand Characteristics

<i>Unit</i>	<i>Acres</i>	<i>Aspect</i>	<i>Slope</i>	<i>Site Index (PIPO)</i>	<i>Plant Assoc. (Volland 1982)</i>
42	33	Flat	0	79	Mixed conifer dry- CWS112
31	28	NW (majority)	0-30	81	ponderosa pine wet- CPS311 ()

Table 1. Stand characteristics for Unit 42

<i>Unit</i>	BA/acre 0-9" dbh	BA/acre 9.1-21" dbh	BA/acre 21"+ dbh	Total BA/acre- all size class	TPA 0-9" dbh	TPA 9.1-20.9" dbh	TPA 21+" dbh	Total TPA all size classes
42	29	33	11	73	434	37	1	472
31	43	27	15	86	518	49	7	573

Dwarf Mistletoe infected trees discussion:

Due to the dwarf mistletoe infected overstory ponderosa pine, dwarf mistletoe has spread throughout the units and on all size classes. This abundance has often caused deformed growth and is especially evident in the smaller size classes.

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Goals of thinning:

Reduce level of ponderosa pine dwarf mistletoe in the stand

Retain ponderosa pine trees that have little to no infection or those with mistletoe allocated to the lowest portion of the crowns (for future pruning).

Reduce stocking to at least 200TPA

The goal is to remove as much of the dwarf mistletoe as possible while still maintaining trees on the site. As such the thinning shall be conducted throughout the diameter range and not strictly from below. This may cause some areas to have openings or be sparsely stocked (especially in the “western flank” of Unit 38 and Unit 42) this is acceptable and expected.

General Silviculture Prescription

This prescription is a weed and clean of the worst of the worst dwarf mistletoe infected ponderosa pine pole size trees (**from 4.5ft tall up to a 12”dbh limit**) and retention of uninfected or infected trees with prunable locations (**See below “Criteria key” for implementation steps**). NOTE- All overstory trees >12”DBH will be retained with future girdling or pruning conducted in a separate step.

Diameter/ size limits across all species 12”dbh

Other species

Cut all white fir and retain all lodgepole (assuming lodgepole is healthy, free of defect and free to grow) (4.5ft tall up to a 12”dbh limit).

PONDEROSA PINE WESTERN DWARF MISTLETOE CUT/ LEAVE TREE CRITERIA KEY.

Developed here with infestation throughout the stands where the goal is to remove as much of the dwarf mistletoe as possible while still maintaining trees on the site.

The key is to be implemented on the individual tree scale

- 1) Tree is absent of infection- “Clean” - **LEAVE**
- 2) Tree is infected – go to **3)**
- 3) Tree has infections on the main stem- **CUT**
- 4) Tree has infections above 16ft* (above a prunable height) - **CUT**
- 5) Tree has infections below 16ft – go to 6 or 7)
- 6) Tree’s infection occupies > 75% live crown- **CUT**
- 7) Tree’s infection occupies <75% live crown- “Prunable tree” **LEAVE**

* 16ft is used as an upper limit due to hand pruning capabilities.

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Stand Level Thinning

Additional thinning may be utilized when it already has been determined that the potentially retained trees are “Clean” or are “Prunable” trees. NOTE the activity of the above cutting steps may have already facilitated density reduction steps and may not be needed in all locations. When this is not the case shoot for 200TPA (15ft X 15ft) allowing for trees to vary in spacing 50%. Alternatively- it is acceptable to have some locations with TPA numbers below 200 TPA in order to facilitate reductions of heavily infested and “unprunable” trees.



Mastication of brush-

Mastication shall prevent damage to leave trees.

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Fuels considerations-

If hand-piling occurs- the creation (size and location) shall be conducted in such a way as to prevent hand-pile burning-induced mortality to leave trees.

Post-sale pruning

Leave trees that are left in the units will be pruned to reduce further spread into the stand. Pruning may occur up to 2/3rd of the live crown. Leave trees with more than 75% infestation may be girdled or pruned entirely for snag creation.

NO prescribed broadcast fire in Unit 42-

Shall be avoided in this unit due to the expectant fuel bed (from mastication), density, sensitive size class and nearby scenic road corridor. Prescribed fire may be conducted in 10+ years from the completion of the thinning and pruning.

Prescribed fire in Unit 31-

Prescribed fire will be utilized to reduce needle drape and raise canopy height (including pruning dead and live branches). Desirable outcomes of burning include retention of 90% of >8" dbh leave trees.